

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**

## WHAT IS CLAIMED IS:

1. A myotherapy massage device for the treatment of lower back myofosical pains, the device comprising:

two laterally spaced massage heads, with each massage head having vibration means;

5 a means for positioning the massage heads vertically relative to one another; and

a means for positioning the massage heads laterally relative to one another.

2. The device according to Claim 1, wherein each massage head has a motor housing enclosing the vibration means, wherein the motor housing comprises

a tube having a bottom end, and a top end;

5 a bottom cap disposed on the bottom end;

a top cap disposed on the top end opposite the bottom cap; and

wherein the vibration means is disposed within the motor housing.

3. The device according to claim 2, further comprising a retention plate disposed between the top and bottom ends of the tube wherein the top cap contacts and rests upon the retention plate, thereby creating top and bottom spaces within the motor housing such that the top space adjacent the  
5 top cap is smaller than the bottom space adjacent the bottom cap.

4. The device according to claim 3, wherein the vibration means comprises a motor which turns an asymmetric weight thereby producing vibration.

5. The device according to claim 4, wherein the motor is disposed in the bottom space and attached to the retention plate and the weight is permitted free movement in the top space.

6. The device according to claim 2, wherein the top cap has a convex top surface.

7. The device according to Claim 2, further comprising a means for heating the top cap.

8. The device according to Claim 7, wherein the means for heating the top cap is taken from the group consisting of heating coils, infrared radiation, resistance wires, and resistance wire tape disposed within the top cap and in contact thereto for conducting heat therethrough.

9. The device according to Claim 7, wherein the top cap is composed of a heat conducting material.

10. The device according to Claim 2, further comprising a coil compression spring disposed in the motor housing between the bottom cap and the top cap thereby cushioning the vibration means such that the vibration of the massage head is dampened with respect to the motor housing and amplified with respect to the top cap.

11. The device according to Claim 3, further comprising a coil compression spring disposed in the motor housing between the bottom cap and the retention plate thereby cushioning the vibration means such that the vibration of the massage head is dampened with respect to the motor housing.

12. The device according to Claim 2, further comprising an edge circumnavigating the tube adjacent the bottom end of the tube such that some length of tube extends therebelow.

13. The device according to Claim 1, wherein the means for positioning the massage heads laterally relative to one another comprises an apparatus having two opposing base assemblies slidably connected to each other by two guide rods, wherein each base assembly comprises two opposing  
5 bases having the means for positioning the massage heads vertically relative to one another disposed between the bases, and a guide disposed on each base having a first opening therethrough for slidably receiving a guide rod.

14. The device according to Claim 13, further comprising means for restricting the movement of the base assemblies relative to the guide rods.

15. The device according to Claim 13, wherein each guide further comprises a perpendicular threaded second opening, bisecting the first opening, for receiving a knob having a screw extension thereon which can be tightened to secure the guide rod in place.

16. The device according to Claim 1, wherein the means for positioning each massage head vertically comprises:

a base assembly composed of two opposing bases and a lift arm disposed between the two opposing bases;

5 the lift arm has a length with a first and second end,  
a means for attaching a massage head at the first end  
a pivot axis at the second end thereof, and  
a lift axis disposed between the first and second ends of the lift arm;

10 a linker, having first and second ends, with the first end of the linker pivotably disposed on the lift axis and the second end of the linker pivotably disposed between the two opposing bases;

a pivot axis assembly having a first threaded opening therein forming a passage therethrough for receiving a crankshaft therethrough and a second threaded opening forming a means for receiving the pivot axis of the second end of the lift arm;

15 the crank shaft having a length, a first end, and a second end;  
a first spacer block attached to and disposed between the two opposing bases and having a threaded opening for receiving a first end of the crank shaft therethrough; and

20 a second spacer block attached to and disposed between the two opposing bases and having a threaded opening therein for receiving a second end of the crankshaft.

17. The device according to claim 16, wherein the crankshaft has a means for rotating the crankshaft disposed on the first end of the crankshaft.

18. The device according to claim 16, further comprising a bend in the lift arm.

19. The device according to claim 16, wherein the second end of the lift arm comprises a U-shaped extension such that the pivot axis assembly fits between two legs of the U-shaped extension.

20. The device according to Claim 19, wherein the two legs of the U-shaped extension extend past the pivot axis.

21. The device according to Claim 1, further comprising a controller for modulating the vibration frequency.

22. The device according to Claim 1, wherein the vibration means operates at a vibration frequency

- (i) greater than about 90 Hz, and
- (ii) less than about 110 Hz.

23. The device according to Claim 1, wherein the vibration means operates at a vibration frequency of about 100±5 Hz.

24. The device according to Claim 1, wherein the means for positioning the massage heads laterally comprises a base assembly having two opposing bases slidably engaged in a track on a platform.

25. The device according to Claim 1, wherein the means for positioning massage heads vertically comprises a base assembly having two opposing bases having massage heads slidably engaged in each base such that the massage heads can individually be positioned vertically.

26. A myotherapy massage device for the treatment of lower back myofosical pains, the device comprising:

two laterally spaced massage heads,

wherein each massage head has a motor housing enclosing a

5 vibration means,

the motor housing has a tube having bottom and top ends,

a bottom cap disposed on the bottom end of the motor housing,

and

a top cap disposed on the top end of the motor housing opposite

10 the bottom cap;

a means for positioning the massage heads vertically relative to one another; and

a means for positioning the massage heads laterally relative to one another.

27. The device according to Claim 26, wherein the means for positioning the massage heads laterally comprises an apparatus having two opposing base assemblies slidably connected to one another by two guide rods, wherein each base assembly comprises two opposing bases having the means  
5 for positioning the massage heads vertically disposed between the bases, and a guide disposed on each base having a first opening therethrough for slidably receiving a guide rod.

28. The device according to Claim 27, wherein the means for positioning each massage head vertically comprises:

a base assembly composed of two opposing bases and a lift arm disposed between the two opposing bases;

5 the lift arm has a length with a first and second end,  
a means for attaching a massage head at the first end  
a pivot axis at the second end thereof, and  
a lift axis disposed between the first and second ends of the lift arm;

10 a linker, having first and second ends, with the first end of the linker pivotably disposed on the lift axis and the second end of the linker pivotably disposed between the two opposing bases;

a pivot axis assembly having a first threaded opening therein forming a passage therethrough for receiving a crankshaft therethrough and a second threaded opening forming a means for receiving the pivot axis of the second end of the lift arm;

the crankshaft having a length, a first end, and a second end;

a first spacer block attached to and disposed between the two opposing bases and having a threaded opening for receiving a first end of the crank shaft therethrough; and

20 a second spacer block attached to and disposed between the two opposing bases and having a threaded opening therein for receiving a second end of the crankshaft.

29. The device according to Claim 28, wherein the means for attaching the massage head to the first end of the lift arm comprises an opening therethrough for receiving the motor housing of the massage head.

30. The device according to claim 28, wherein the crankshaft has a handle for rotating the shaft disposed on the first end of the shaft.

31. The device according to claim 29, further comprising a bend in the lift arm at the lift axis.



32. A massage device comprising:

a massage head having a motor housing enclosing a vibration means,  
the motor housing has a tube having bottom and top ends,  
a bottom cap disposed on the bottom end of the motor housing,

5 and

a top cap disposed on the top end of the motor housing opposite  
the bottom cap; and

a means for positioning each massage head vertically comprising a base  
assembly composed of two opposing bases and a lift arm disposed between the  
two opposing bases;

10

the lift arm has a length with a first and second end,

a means for attaching a massage head at the first end

a pivot axis at the second end thereof, and

a lift axis disposed between the first and second ends of the lift

15

arm;

a linker, having first and second ends, with the first end of the linker  
pivotably disposed on the lift axis and the second end of the linker pivotably  
disposed between the two opposing bases;

20

a pivot axis assembly having a first threaded opening therein forming a  
passage therethrough for receiving a crankshaft therethrough and a second  
threaded opening forming a means for receiving the pivot axis of the second  
end of the lift arm;

the crank shaft having a length, a first end, and a second end;

25

a first spacer block attached to and disposed between the two opposing  
bases and having a threaded opening for receiving a first end of the crank shaft  
therethrough; and

a second spacer block attached to and disposed between the two  
opposing bases and having a threaded opening therein for receiving a second  
end of the crankshaft.

33. The device according to Claim 32, wherein the means for  
attaching the massage head to the first end of the lift arm comprises an opening  
therethrough for receiving the motor housing of the massage head.

34. The device according to claim 32, wherein the crankshaft has a handle for rotating the shaft disposed on the first end of the shaft.

35. The device according to claim 32, further comprising a bend in the lift arm at the lift axis.

36. A method for treating myofascial pain in the lower back of a user by relieving tension in the lower back muscles, said method comprising:

providing a massage device having two laterally spaced massage heads, each massage head having vibration means, a means for positioning the massage heads vertically relative to one another, and a means for positioning the massage heads laterally relative to one another;

placing the massage device on a sturdy flat surface;

placing the back on the device such that each massage head comes into contact with the opposite sides of the lower back thereby applying pressure to the areas of contact

adjusting each massage head's relative position; and

applying vibration to the desired locations of the lower back.

37. The method of claim 36, wherein the areas of contact are the outer sides of the muscles that run along both sides of the spine.

38. The method of claim 36, wherein the vibration is applied for about one to two minutes.

39. The method of claim 36, wherein the massage head has a means for heating the areas of contact.

40. The method of claim 39, wherein the vibration and heat are applied for about one to two minutes.